

ABSTRACT

Disclosed is a duo-binary optical transmission apparatus having an optical modulator for transmitting a duo-binary optical signal having a strong wavelength dispersion without using an electrical low pass filter (LPF) or a phase modulator. The optical modulator includes: a code converter for converting a 2-level data signal into a duo-binary signal; a driving signal generator for receiving the duo-binary signal and generating a modulator driving signal; a Mach-Zehnder interference type light intensity modulator for receiving the modulator driving signal, converting a phase of the light carrier, and outputting a modulated optical signal obtained by modulating light intensity; and, an optical band pass filter for receiving the modulated optical signal from the Mach-Zehnder interference type light intensity modulator, filtering the modulated optical signal to be suitable for a predetermined band, and outputting a duo-binary optical signal.